

Engineering Development Model

DC Pass, High Power Directional Coupler

ZGDC6-ED13551/1

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.



Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : HT1398

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency		380		3600	MHz
Coupling	Nominal		6.9±1.6		dB
	Flatness		±1.0		dB
Mainline Loss(1)	380-3600 MHz		1.40		dB
Directivity	380-3600 MHz		27		dB
VSWR	380-3600 MHz		1.10		(:1)
RF Power Input (2)	380-2700 MHz			250	W
	2700-3600 MHz			160	

(1) Mainline loss includes theoretical coupled power loss of 0.992 dB at 6.9dB coupling.

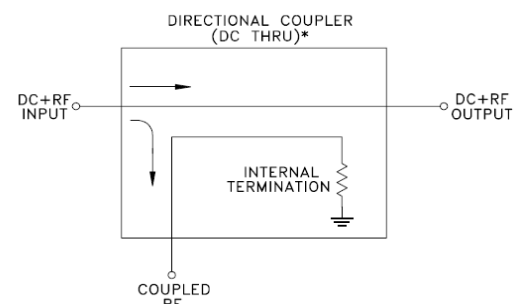
(2) At 20°C, derate linearly to 100W (380-2700 MHz) and to 64W (2700-3600 MHz) from 25°C to 100°C. Output load VSWR 2.0:1 Max.

MAXIMUM RATINGS	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	3A
Supplied Termination (3)	10W

(3) Derate linearly by 0.18W/°C from 70°C to 100°C

COAXIAL CONNECTIONS	
INPUT	IN
OUTPUT	OUT
COUPLED	CPL
INTERNAL TERMINATION (50 Ω)	TERM

Electrical Schematic



* ELECTRICAL SCHEMATIC FOR DIRECTIONAL COUPLER THAT IS DESIGNED WITHOUT INTERNAL TRANSFORMERS.

Directional Coupler

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Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	COUPLING (dB)	DIRECTIVITY (dB)	RETURN LOSS		
				IN	OUT	CPL
380.0	0.80	8.02	33.46	42.22	38.93	39.54
400.0	0.85	7.77	33.18	40.97	38.83	39.68
500.0	1.07	6.86	30.82	38.76	40.01	41.02
600.0	1.21	6.39	29.89	37.57	42.64	41.67
700.0	1.27	6.21	29.64	38.11	42.48	46.96
800.0	1.28	6.21	29.26	37.22	40.91	46.43
900.0	1.26	6.31	29.87	39.61	38.05	39.78
1000.0	1.24	6.41	31.52	43.45	35.43	37.87
1200.0	1.27	6.36	27.75	33.59	33.74	33.86
1300.0	1.32	6.23	25.74	31.66	32.66	34.79
1400.0	1.37	6.10	24.14	30.00	30.21	36.25
1500.0	1.41	6.03	22.77	28.67	29.22	33.19
1600.0	1.42	6.04	22.66	27.44	30.51	28.82
1700.0	1.41	6.12	23.29	25.41	39.10	25.44
1800.0	1.39	6.24	23.29	22.82	34.01	23.11
1900.0	1.37	6.34	22.68	21.54	26.11	22.12
2000.0	1.36	6.39	21.82	21.71	24.26	22.22
2100.0	1.38	6.36	20.36	22.13	24.53	22.72
2200.0	1.40	6.28	19.14	23.12	26.92	23.30
2300.0	1.43	6.22	18.85	23.85	32.40	22.92
2400.0	1.46	6.21	18.97	22.86	38.20	21.65
2500.0	1.45	6.25	19.40	21.90	27.76	20.88
2600.0	1.43	6.34	20.31	21.11	23.67	20.62
2700.0	1.40	6.44	20.67	21.28	23.13	21.81
2800.0	1.39	6.53	19.79	22.10	25.23	24.18
2900.0	1.39	6.57	18.56	23.79	31.24	26.21
3000.0	1.39	6.55	17.87	25.49	34.67	27.03
3100.0	1.41	6.49	17.77	25.84	32.54	25.68
3200.0	1.41	6.43	18.50	25.04	33.50	23.43
3300.0	1.44	6.40	19.85	24.27	35.25	22.88
3400.0	1.46	6.41	21.32	23.63	34.22	22.20
3500.0	1.47	6.46	21.20	22.22	34.01	22.59
3600.0	1.46	6.53	18.78	21.14	32.64	25.18
3700.0	1.44	6.61	16.58	20.02	28.91	26.87
3800.0	1.45	6.67	15.15	19.07	26.32	27.09
3900.0	1.45	6.70	14.42	19.04	24.83	24.85
4000.0	1.46	6.62	14.72	20.73	24.78	21.57
4100.0	1.48	6.53	15.58	23.42	27.19	20.54
4200.0	1.51	6.52	17.05	22.42	24.59	21.95
4300.0	1.56	6.40	17.02	19.25	21.44	23.77
4400.0	1.55	6.46	18.18	18.05	19.11	32.27
4500.0	1.51	6.55	18.09	18.24	19.13	33.62
4600.0	1.44	6.62	17.57	23.50	22.94	24.46
4700.0	1.52	6.78	16.62	32.86	21.79	21.79
4800.0	1.50	6.65	16.92	22.93	17.39	21.18
4900.0	1.54	6.60	18.26	17.49	15.18	21.97
5000.0	1.53	6.58	20.11	17.60	16.26	24.63



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IR/RF MICROWAVE COMPONENTS



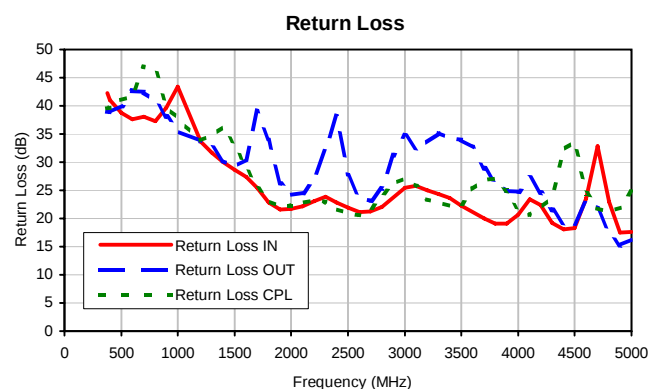
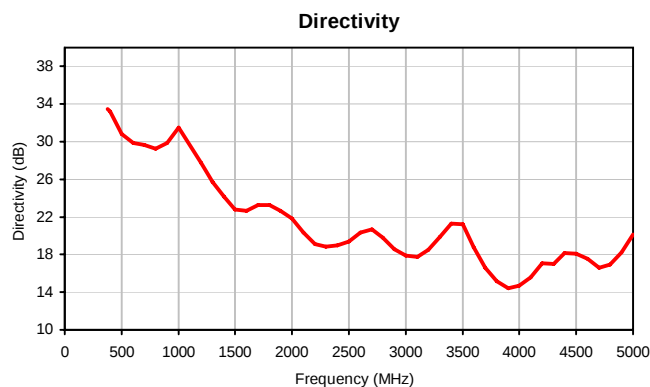
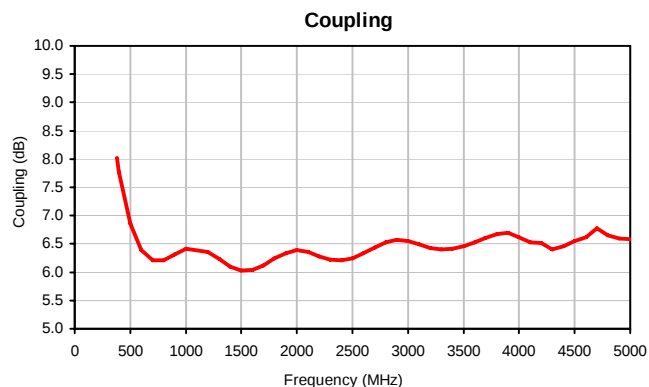
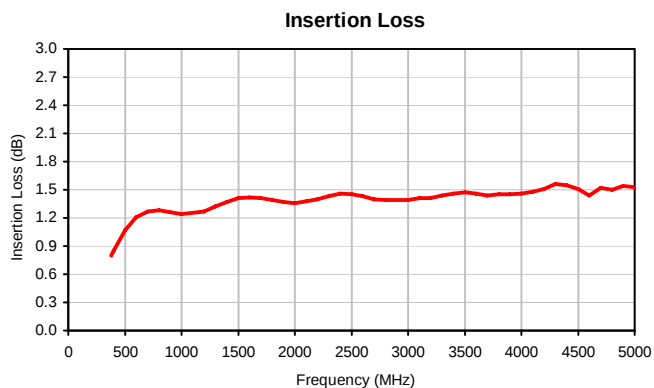
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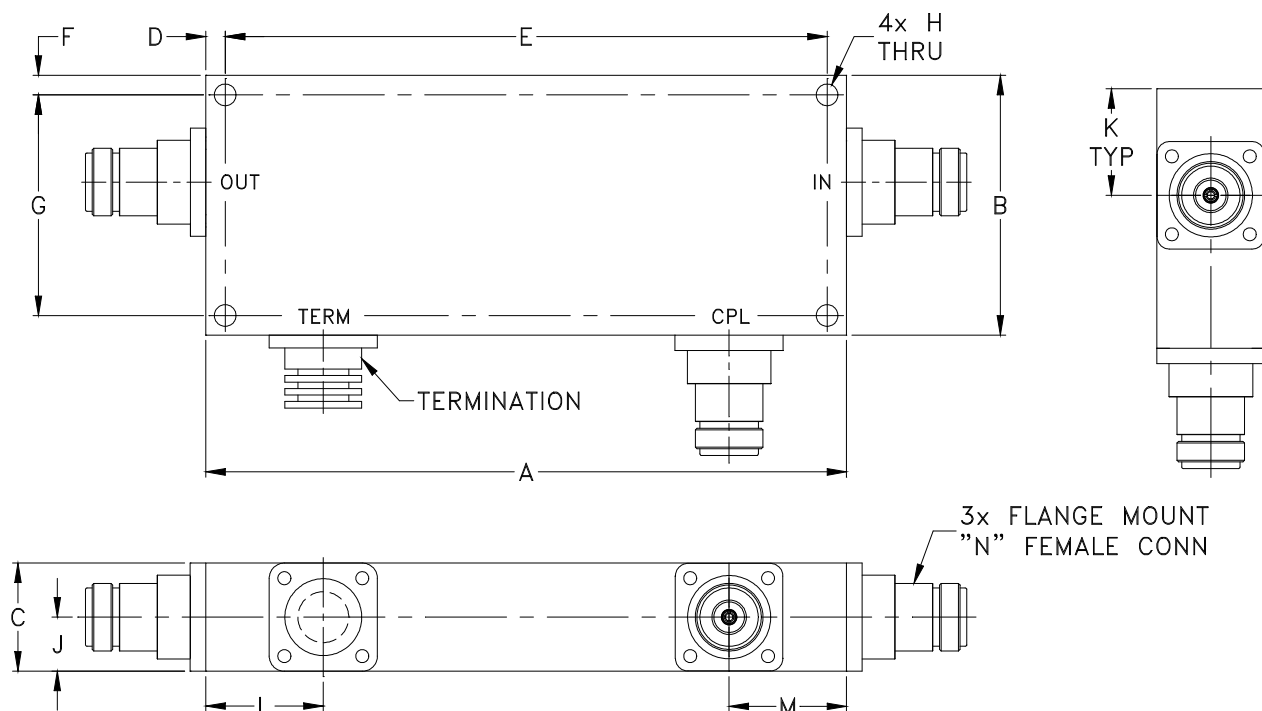
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Typical Performance Curves



Outline Dimensions



CASE #	A	B	C	D	E	F	G	H	J	K	L	M	WT. GRAM
HT1398	5.93 (150.62)	2.40 (60.96)	1.00 (25.40)	.18 (4.57)	5.565 (141.35)	.18 (4.57)	2.040 (51.82)	.200 (5.08)	.50 (12.70)	.99 (25.15)	1.09 (27.69)	1.09 (27.69)	700.0

Dimensions are in inches (mm). Tolerances: 2Pl. $\pm .03$; 3Pl. $\pm .015$

Notes:

- Case material: Aluminum alloy.
- Case finish:

For RoHS Case Styles: Clear Chemical conversion coating, non-chrome or trivalent chrome based.